

REMARKS

Claims 1-20 are pending in the application. In the Office Action at hand, Claims 2, 5-10, 12 and 15-20 are withdrawn from consideration, and Claims 1, 3, 4, 11, 13 and 14 are rejected.

In particular, Claims 1, 3, 4, 11, 13 and 14 are rejected under 35 U.S.C. § 102(b) as anticipated in view of Chabert (U.S. Patent No. 5,038,774). In response to the Section 102(b) rejection, the Applicants respectfully submit that Claims 1, 3, 4, 11, 13 and 14 are not anticipated by Chabert. Reconsideration is respectfully requested.

The invention of independent Claim 1 recites a gas regulator that includes a delivery valve assembly having a delivery outlet and a delivery valve member engageable with the delivery outlet for controlling flow of a gas. A timing gas chamber is included for receiving gas. Gas pressure within the timing gas chamber controls the operation of the delivery valve member. A user adjustment system controls the amount of time required for the gas to sufficiently fill the timing gas chamber to control the length of time that the delivery valve assembly is opened.

Independent Claim 3 recites an adjustment system including a volume adjustment device for adjusting the volume of the timing gas chamber. Independent Claims 11 and 13 recite methods of regulating gas, and generally parallel Claims 1 and 3, respectively.

In contrast, Chabert discloses in FIG. 1 an expander for an underwater diver which receives gas from a gas tank through a passage 6 and into a high pressure chamber 3. The expander has a first stage expander 1 and an auxiliary pilot expander 21. The first stage expander 1 receives gas from the high pressure chamber 3 and includes a piston 8 having a passage 16 extending through the piston 8. The passage 16 engages a valve seat 13 at one end to form a valve 12. The position of the piston 8 changes in response to changes in the relative gas pressures in compartments 15 and 17 on the opposite sides of the piston 8 and controls the flow of gas through valve 12 and passage 16. Gas that is allowed to pass through the passage 16 is delivered through passage 50 to a second stage expander at the diver's nasal passages. The auxiliary pilot expander 21 has a piston 28 with a valve 32 for delivering gas from high pressure chamber 3 to compartment 17. A spring 44 helps open the valve 32. The piston 28 has passages 24 and 43 which allow gas to pass through the piston 28 to the opposite side for closing valve 32.

The pistons 8 /28 and valves 12/32 in Chabert merely move in response to the breathing cycle of the diver for delivering gas to the diver and are in no way adjustable for changing the amount of delivered gas to a desired level. The amount of movement of the pistons 8/28 and valves 12/32 can vary with varying breathing patterns of the diver.

As can be seen, *Chabert has no adjustment systems of any type*. For example, there are no flow rate adjustment devices or volume adjustment devices in Chabert for controlling the amount of time that the valves are open. As a result, it is apparent that Chabert does not have a user adjustment system or a volume adjustment device, as claimed in the present invention, which can control the amount of time required for filling a timing gas chamber for controlling the length of time that the delivery valve assembly is opened.

Accordingly, Claims 1, 3, 4, 11, 13 and 14 are not anticipated by Chabert since Chabert does not teach or suggest an “adjustment system for controlling the amount of time required for the gas to sufficiently fill the timing gas chamber to control the length of time that the delivery valve assembly is opened,” as recited in Claims 1 and 3 and similarly in method Claims 11 and 13, or “a volume adjustment device for adjusting the volume of the timing gas chamber,” as recited in Claims 3 and 13. In addition, Chabert does not teach or suggest that the “volume adjustment device includes an adjustable piston,” as recited in Claim 4 and similarly in Claim 14. Therefore, Claims 1, 3, 4, 11, 13 and 14 are in condition for allowance. Reconsideration is respectfully requested.

CONCLUSION

In view of the above remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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